REMARKS

By this Amendment, claim 1 has been amended. Claims 1 and 3-5 are pending in the application. Support for the amendments to claim 1 is provided in the drawings. Paragraph [0015] of the specification has been amended to provide antecedent basis for the features added to claim 1. Applicants submit that the amendments to claim 1 (a) do not raise any new issue that would require further search and/or consideration; (b) do not raise the issue of new matter; (c) do not add any new claims; and (d) place the application in better form for appeal. Reconsideration, reexamination and allowance are respectfully requested in view of the following remarks.

Telephonic Interview

Applicants thank Examiner Verdier for the courtesies extended to their undersigned representative during the telephonic interview conducted on April 21, 2005. As was explained during the interview, claim 1 is patentably distinguishable over the references applied in the rejections discussed below.

Examiner's Suggested Claim Language

Applicants appreciate the Examiner's suggestion to amend claim 1 to delete the recitation of "and the second passage" at line 6. Claim 1 recites "a second passage comprising an inspection aperture" (emphasis added). For example, Fig. 2 shows an exemplary embodiment of the component including channel 7 leading to aperture (or dust hole) 5. The channel 7 comprises the aperture 5. See the description at paragraph [0015] of the present specification and the marked-up figure

attached to the Amendment filed on April 8, 2004. Claim 1 encompasses this and other embodiments of the component. Applicants submit that claim 1 is sufficiently clear and precise.

First Rejection Under 35 U.S.C. § 102

Claims 1, 3 and 4 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 4,992,026 to Ohtomo et al. ("Ohtomo"). The rejection is respectfully traversed.

Claim 1, as amended, recites a component of a fluid flow machine, which comprises "a coolant passage comprising at least one curved flow section; and a second passage comprising an inspection aperture, the inspection aperture including a wall flush with a wall of the coolant passage, the inspection aperture being arranged and dimensioned to enable the introduction of a borescope through the inspection aperture and the second passage, and the second passage (i) branching off the coolant passage at the curved flow section and (ii) being arranged as a tangent to the curved flow section" (emphasis added).

Claim 1 has been amended for clarification. Support for the amendments to claim 1 is shown in FIG. 2 of the drawings. The component shown in FIG. 2 includes channels 4 and 7. Channel 7 is defined in part by a portion of blade 3, which is flush with a remaining portion of blade 3 used to form channel 4. FIG. 2 also shows that a cooling medium can be flowed through the channel (or passage) 4, and passage 7 is tangent to a curved flow section of the coolant passage and also branches off the coolant passage at the curved flow section. In the claimed component, coolant can flow along the passage 4 and the curved flow section, while entrained dirt or dust particles undergo minimal deflection. For example, in the embodiment shown in FIG.

2, dust particles can pass through the channels 4, 7 and aperture 5 due to their inertia, and be removed from the coolant.

Ohtomo fails to disclose every feature recited in claim 1. The Office Action refers to FIG. 4 of Ohtomo, which shows a gas turbine blade main body 10 including a first passage portion 50, a passage portion 52 and air holes 62. The Office Action asserts that the passages comprise at least one "curved flow section near 66." The Examiner asserts that the air hole 62 comprises an inspection aperture.

Applicants submit that, at the least, Ohtomo's main body 10 does not include an inspection aperture as recited in claim 1. Thus, Ohtomo does not anticipate the component of claim 1. Dependent claims 3 and 5 also are not anticipated by Ohtomo for at least the same reasons as those for claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Second Rejection Under 35 U.S.C. § 102

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,206,638 to Glynn et al. ("Glynn"). The rejection is respectfully traversed.

The Office Action refers to the airfoil 12 shown in Fig. 3 of Glynn and contends that the airfoil includes a "coolant passage 40" (channel 40) comprising "at least one curved flow section near 37A," and a "second passage 59" (tip cooling hole 59) comprising an inspection aperture arranged and dimensioned for introduction of a borescope through the inspection aperture and second passage, and that the second passage branches off the coolant passage at the curved flow section and is arranged as a tangent to the curved flow section.

Applicants submit that, at the least, Glynn's airfoil 12 does not include an inspection aperture, as recited in claim 1. Thus, Glynn does not anticipate the component of claim 1. Dependent claims 3 and 5 also are not anticipated by Glynn for at least the same reasons as those for claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Third Rejection Under 35 U.S.C. § 102

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,902,093 to Liotta et al. ("Liotta"). The rejection is respectfully traversed.

The Office Action refers to Fig. 2 of Liotta and asserts that the blade 10 includes a "coolant passage 40e, 40g" (third pass 40e, fourth pass 40g) comprising "at least one curved flow section near 40f," and a "second passage 44a" (hole 44a) comprising an inspection aperture arranged and dimensioned for introduction of a borescope through the inspection aperture and second passage, and that the second passage branches off the coolant passage at the curved flow section and is arranged as a tangent to the curved flow section.

Applicants submit that, at the least, Liotta' blade 10 does not include an inspection aperture, as recited in claim 1. Thus, Liotta does not anticipate the component of claim 1. Dependent claims 3 and 5 also are not anticipated by Liotta for at least the same reasons as those for claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Fourth Rejection Under 35 U.S.C. § 102

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 102(b) over "Sidenstick 3,533,711." However, U.S. Patent No. 3,533,711 is to Kercher et al. ("Kercher"). Applicants will accordingly address the following comments to Kercher. The rejection is respectfully traversed.

The Office Action refers to Fig. 4 (assumed to be of Kercher) and asserts that the illustrated vane includes a "coolant passage 42, 43" (radial passages 42, 43) comprising "at least one curved flow section near 54," and a "second passage 53" (bleed opening 53) comprising an inspection aperture arranged and dimensioned for introduction of a borescope through the inspection aperture and second passage, and that the second passage branches off the coolant passage at the curved flow section and is arranged as a tangent to the curved flow section.

Applicants submit that, at the least, Kercher's vane does not include an inspection aperture, as recited in claim 1. Thus, Kercher does not anticipate the component of claim 1. Dependent claims 3 and 5 also are not anticipated by Kercher for at least the same reasons as those for claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Fifth Rejection Under 35 U.S.C. § 102

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 102(b) over "Kercher 3,628,885." However, U.S. Patent No. 3,628,885 is to Sidenstick et al. ("Sidenstick"). Applicants will accordingly address the following comments to Sidenstick. The rejection is respectfully traversed.

The Office Action refers to Fig. 2 (assumed to be of Sidenstick) and asserts that the illustrated airfoil portion 12 includes a "coolant passage 58" (chamber 58) comprising "at least one unnumbered flow section," and a "second passage 76" (tip cap aperture 76) comprising an inspection aperture arranged and dimensioned for introduction of a borescope through the inspection aperture and second passage, and that the second passage branches off the coolant passage at the curved flow section and is arranged as a tangent to the curved flow section.

Applicants submit that, at the least, Sidenstick's airfoil portion 12 does not include an inspection aperture, as recited in claim 1. Thus, Sidenstick does not anticipate the component of claim 1. Dependent claims 3 and 5 also are not anticipated by Sidenstick for at least the same reasons as those for claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Conclusion

For the foregoing reasons, allowance of the application is respectfully requested. Should there be any questions concerning this response, Applicants' undersigned representative can be reached at the telephone number given below.

Respectfully submitted,

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Date: April 21, 2005

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